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October 31, 2006

The Honorable Stephen L. Johnson
Administrator
The United States Environmental Protection Agency
1200 Pennsylvania Avenue
Washington, D.C. 20460

**Re: DuPont progress towards meeting the Environmental Protection Agency (EPA)
2010/15 PFOA Stewardship Program**

Dear Mr. Administrator,

This letter is in response to your request for the first annual report on industry participation in the global 2010/15 PFOA Stewardship Program, the voluntary emissions reduction program for perfluorooctanoic acid (PFOA) that you announced in January. As demonstrated by the actions outlined in this report, DuPont remains committed to the program goals and has already achieved significant reductions. Building upon research initiated years ago, DuPont has developed technologies that substantially limit PFOA content in our products and emissions from our manufacturing facilities. In fact, DuPont is pleased to report that we will exceed the 2010 objective of a 95 percent reduction in domestic manufacturing facility emissions by the end of this year.

In light of the growing body of knowledge that has emerged over the past few years about PFOA sources and pathways of exposure, it has become clear that use of DuPont products manufactured from processes that use PFOA are not a significant source of exposure. Emissions from the manufacturing and use of PFOA and POSF derivatives over 50 years appear to be a significant source of background levels of PFOA in the environment and these emissions are being dramatically reduced. It logically follows that as these emissions drop, so too will levels found in the blood of the general population, and, in fact, some data suggest that this may already be occurring. Based on our experience to date, which has been informed by extensive ongoing scientific research conducted by DuPont and other independent organizations, we are convinced the Stewardship Program offers the most effective and efficient near-term approach to further reducing exposure to this chemical.

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PFOA has been detected in the environment and in the blood of the general population at very low levels. DuPont recognizes that the presence of PFOA in people's blood and the environment raises questions that should be addressed. Thus, we have taken action to reduce the potential for exposure to PFOA from our products and processes. DuPont continues to support EPA's efforts to gain greater knowledge about PFOA and its potential impact on human health and the environment and pledges continued cooperation with EPA as it undertakes appropriate methods for addressing biopersistent materials in our environment.

DuPont Achievements

In this report, we detail the progress we have made, not only in meeting the goals and objectives of the 2010/15 PFOA Stewardship Program, but also in transforming the way our products are made with the objective of significantly reducing emissions and expanding the base of scientific knowledge surrounding this chemical and its potential health effects. Our report includes baseline year information, as well as general progress made in emissions and product content reductions.

The DuPont achievements include:

- Reduced PFOA emissions in the global manufacture of fluoropolymers and fluorotelomers by more than 95 percent since 2000. The U.S. reduction is 97 percent;
- Reduced PFOA in converted fluoropolymer dispersion product content by 97 percent;
- Reduced PFOA and direct precursors in fluorotelomer product content by 97 percent in the U.S. by year end;
- Reduced worldwide PFOA emissions from manufacturing facilities from more than 150,000 lbs. in 2000 to less than 7,000 lbs. in 2006.
- Reduced PFOA emissions from U.S. manufacturing facilities from more than 108,000 lbs. to less than 3,000 lbs. in the same period.
- Developed DuPont patents and technology for PFOA emissions abatement, water treatment and recovery for reuse.
- Shared royalty-free access to DuPont patents and technology for PFOA emissions abatement, water treatment and recovery for reuse.
- Contributed to scientific knowledge base: more than 60 published scientific articles.

The actions described in this report are the result of an intensive R&D effort initiated prior to the EPA voluntary program as part of an internal PFOA reduction program at DuPont. Since the inception of this program, DuPont has transformed the way fluoropolymers and fluorotelomers are made by meeting the objective to significantly reduce PFOA use. Accordingly, DuPont is severely restricting potential routes of exposure from its facilities, processes, and products.

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Moreover, our improved understanding of this material and the technologies that have been developed to control PFOA emissions has allowed us to produce more environmentally sustainable products without sacrificing performance.

PFOA Reduction - Fluoropolymers

DuPont has devoted substantial resources to reduce fluoropolymer manufacturing PFOA emissions since the late 1990's. We have developed new science and adapted existing technology to our processes capable of achieving 99 percent-plus removal efficiency in specific air and wastewater streams.

Since 1998, DuPont has installed 20 capital projects at our three main fluoropolymer production sites in the U.S., Europe, and Japan. These projects have also reduced emissions in a way that allows us to recover and recycle a substantial portion of the PFOA used.

Compared to 2000, these projects have reduced worldwide fluoropolymer manufacturing facility PFOA emissions to air and water by 90 percent through the end of 2005, with a 95 percent reduction projected in 2006. Two more major projects will be completed in 2007 that are projected to further reduce emissions to the 97 percent level.

DuPont will apply these reductions globally, as witnessed by the latest versions of this technology being installed in our new fluoropolymer manufacturing facility in Changshu, China. We have also shared royalty-free access to DuPont patents and technology for PFOA emissions abatement, water treatment and recovery for reuse.

DuPont also installed state-of-the-art emission abatement technology in our APFO (the ammonium salt of PFOA used as a polymerization aid in fluoropolymer production) manufacturing facility which limits emissions to less than 50 pounds per year; a reduction of more than 99 percent compared to the previous U.S. manufacturers' facility.

PFOA is largely removed in the manufacturing and conversion processes for virtually all industrial fluoropolymer applications. Testing has shown that while some industrial products may contain trace levels of PFOA, our research has found no detectable levels of PFOA in cookware products made with DuPont non-stick coatings.

DuPont is reducing PFOA content in aqueous fluoropolymer dispersions (AFD) by implementing the Dispersion Reformulation Project (DRP). DRP has been underway since mid-2004 and has involved significant effort and costs within DuPont and by our customers.

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PFOA itself is considered the "representative compound" to track in AFD, as the pure ammonium salt is and has been historically used for production. The baseline year for calculating the percent reduction is 2003 (necessary data from year 2000 was not sufficiently available). During that year, weighted average PFOA content for worldwide DuPont AFD was 1000 parts per million (ppm) on wet-weight basis, 970 ppm from U.S. operations and 1040 ppm from non-U.S. facilities. This corresponds to an overall dry-weight basis of about 2000 ppm.

In the past two years, we have developed and scaled up the DRP technology, constructed and started up commercial facilities at all three of our existing sites (including a fourth site now under construction at a fourth site in China), and have reduced PFOA content by at least 97 percent in converted products. As of September 2006, DuPont has converted approximately 50 percent of the product line by volume to low-PFOA products, and we are on track to convert over 90 percent of our volume to low-PFOA AFD by the end of 2006, consistent with the Fluoropolymers Manufacturers Group commitment made to EPA in February 2005. Again, these converted products have better than 97 percent reduction of PFOA versus baseline.

In the past year, through collaboration with customers and the supply chain, three application areas (automotive, military and medical) have been selectively identified that, due to their criticality, will require extended qualification times for complete conversion to new low-PFOA products. Thus, manufacturing and supply of old products will be necessary beyond 2007 in these applications. AFDs going into these applications will constitute less than 10 percent of our product volume in 2007, and this percentage will be reduced further as the new products are systematically qualified. Even with these exceptions we expect to achieve 95 percent overall product content reduction in 2008; two years ahead of the EPA's requested 2010 Stewardship Program goal timing, and 97 percent overall reduction by 2010.

PFOA, Higher Homologue and Precursor Reduction - Fluorotelomers

While DuPont fluorotelomer processes and products have never been a major source, DuPont has actively worked to minimize emissions of PFOA, PFOA precursors and related higher homologues.

Fluorotelomer products are not made with PFOA, nor is PFOA added during the manufacture of fluorotelomer-based products. PFOA is found in trace amounts in some fluorotelomer products as an unintended manufacturing byproduct. Scientific studies have confirmed that fluorotelomer manufacturing emissions have not been a significant source of PFOA in the environment.

DuPont has sponsored and published independent, peer-reviewed studies showing that, even under the most conservative of assumptions, consumer articles manufactured with DuPont fluorotelomer products do not represent a quantifiable source of consumer exposure to PFOA.

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Nevertheless, DuPont has diligently worked to reduce trace quantities of PFOA, PFOA precursors and related higher homologues from our fluorotelomer products. We have invested \$20 million in a new facility to destroy trace levels of these compounds in our fluorotelomer products. This, plus implementation of other planned improvements, is expected to reduce PFOA and direct precursor content in DuPont fluorotelomer products globally by more than 95 percent by year end 2007.

DuPont is extending our stewardship program to consumers of fluorotelomer intermediates. Products derived from intermediates manufactured under new processes should show a similar reduction in PFOA and direct precursor content and where it is not technically feasible to modify the intermediates, we have encouraged our customers to pursue a program that will result in emission and product content reductions.

Consistent with EPA's 2015 goal, DuPont has undertaken an aggressive product development effort to reduce our environmental "footprint" by engineering advanced substitutes, while still maintaining high levels of effectiveness and performance. Success in this area will depend on timely EPA review and approvals for these new products.

DuPont's Scientific Contribution

In our January 25, 2006 letter to the Administrator, DuPont indicated that it would work collaboratively to meet the needs of the Agency in gaining greater knowledge about PFOA and its impact on human health and the environment. The efforts have been extensive and comprehensive and have covered topics such as toxicology, atmospheric chemistry and methods, environmental modeling, fate, biodegradation, and risk assessment. More than 60 peer-reviewed studies have been published over the past few years.

Our science and research strategy has been designed to address a number of questions, including: Where are PFOA, related higher homologues and polyfluorinated materials found in the environment? What are the potential sources and routes of transport? What can be done to reduce exposure and measure progress? What is the impact (if any) of trace levels of PFOA in finished articles? Attached for your reference is a compilation of the studies that address these questions.

Going forward, our scientific efforts will be focused on new product development, longitudinal blood studies and selected health studies. We will continue to partner with the global science community on environmental biomonitoring. Further, we will work with others in industry to inform EPA's regulatory counterparts in the European Union, Canada, China, and Japan about activities and new information surrounding PFOA.

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Health and Safety

DuPont has put our science to work, not only to learn more about PFOA, but most importantly to ensure our workers are safe, the public is safe, our products are safe and the environment is well protected. DuPont products made with or containing trace amounts of PFOA are safe for consumers. To date, there are no human health effects known to be caused by PFOA. Recent results of an extensive study of the health of more than 6,000 current and former workers at our plant in West Virginia -- workers who generally have higher levels of PFOA in their blood than the general population -- support this conclusion. Based on published, peer-reviewed health and toxicological studies conducted by DuPont and other researchers, DuPont believes the weight of evidence indicates that PFOA exposure does not pose a health risk to the general public.

As demonstrated in this report, we have taken aggressive action to reduce exposure to PFOA from our products and processes and, in addition, we have conducted new health studies, expanded our monitoring data and performed extensive fate and exposure analyses. DuPont has also proactively analyzed consumer articles for PFOA content, estimated potential theoretical exposure and conducted risk characterizations to assure the safety of consumer articles. These studies were conducted by a third party and peer-reviewed by an independent scientific panel. The results reaffirmed DuPont's position that DuPont products are safe for their intended uses, and the use of these products would not result in quantifiable exposure to consumers.

Transparency and Global Participation

We continue to believe that essential elements of a successful stewardship program are transparency of effort and results, as well as global participation. DuPont is committed to applying the stewardship program to all of our facilities worldwide. While actual numbers are difficult to obtain for competitive reasons, more than half of the world's PFOA is made and used by other companies outside of the U.S. with manufacturing facilities in Japan, Europe and China. We look to EPA to work with your counterparts in other countries to ensure all manufacturers work to reduce emissions.

In the wake of the industry submissions, we look forward to working with the Agency to ensure that the reported results by participants are both comparable and reliable, and to help establish scientifically credible analytical standards and laboratory methods for measuring the chemicals in the program by the goal attainment year 2010. This will allow both EPA and the public to evaluate the progress being made.

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DuPont Commitment

In summary, the DuPont commitment as part of the EPA 2010/2015 PFOA Stewardship Program is the following:

- Reduce global PFOA emissions from manufacturing facilities by 97% by year-end 2007
- Reduce global emissions of PFOA and direct precursors from fluorotelomer manufacturing by 95% by year-end 2010.
- Reduce PFOA content in fluoropolymer dispersions by 90% in 2007, 95% in 2008, and 97% by 2010
- Reduce product content of PFOA and direct precursors in DuPont fluorotelomer products globally by 96% by year-end 2007 and reduce indirect precursors by 95% by year-end 2010
- Conduct studies on fluorotelomer products themselves to assess the potential for breakdown to PFOA and higher homologues
- Work toward elimination of PFOA, PFOA precursors and related higher homologue chemicals from manufacturing facilities' emissions and products by 2015

Summary

The improvements that are already underway are producing dramatic PFOA reductions and you can count on DuPont's continued commitment on this issue. DuPont science is succeeding at improving our manufacturing processes and products beyond even the aggressive goals we have shared with you. As we work toward the elimination of PFOA, PFOA precursors and related higher homologues by 2015, our goal is to commercialize breakthrough products that completely redefine fluorine chemistry applications and achieve environmentally sustainable growth of this important product line. We look forward to working with EPA and the rest of the fluorotelomer and fluoropolymer industry as we pursue these important objectives.

Respectfully submitted,

Susan M. Stalnecker
Vice President & Treasurer

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UNITED STATES ENVIRONMENTAL PROTECTION
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November 17, 2006

MEMORANDUM

TO: Walker Smith, Esq., Director
Office of Civil Enforcement

THROUGH: Diana A. Love, Director *[Signature]* DAL
National Enforcement Investigations Center

FROM: Christopher P. Weis, Ph.D., DABT *[Signature]*
Senior Toxicologist

SUBJECT: Hazard Evaluation and Revised Site-Specific Threshold for Perfluorooctanoate (PFOA or C8; CAS #335-67-1) in drinking water near the DuPont Washington Works facility, West Virginia. (Rev. 1)

The purpose of this memorandum is to present an overview of emergent and historical toxicological data in light of site-specific human exposure information on perfluorooctanoate (PFOA or C8; hereafter referred to as C8) and to provide recommendations relevant to these exposures in the vicinity of the DuPont Teflon[®] manufacturing facility known as the Washington Works facility near Parkersburg, WV. This memorandum is not intended to provide a comprehensive review of the available literature on C8. Such a review may be found in the USEPA draft risk assessment for this compound (1). Rather, it is intended to express NEIC's concerns about elevated human exposures near the Washington Works facility and to provide precautionary recommendations for the protection of communities affected by release of C8 from the Washington Works facility.

As part of the effort by the Office of Pollution Prevention and Toxics (OPPT) to understand health and environmental issues presented by fluorochemicals in the wake of unexpected toxicological and bioaccumulation discoveries with respect to perfluorooctane sulfonates (PFOS), OPPT has been investigating C8 and its salts. The Director of OPPT initiated a priority review (9/27/2002) of C8 and its salts which resulted in the development of an ongoing series of hazard and risk assessments. In February 2005, the SAB reviewed the draft risk assessment, and finalized their comments in May 2006.

C8, a perfluorinated carboxylic acid with the general formula $C_8HF_{15}O_2$, is man-made and does not occur naturally in the environment. C8 is an environmentally stable surfactant with an extremely long elimination half life in humans; the current estimate is a mean of 3.8 years with a range of 1.5 to 13.5 years (2). Because of this long elimination half life, C8 tends to occur in human tissues at concentrations greater than those found in the surrounding environment.

Recent human exposure studies were conducted by the University of Pennsylvania. The study participants included 326 residents from four communities in southeastern Ohio near DuPont's Washington Works facility who demonstrated average C8 concentrations in blood serum ranging

from 298 to 369 parts per billion (3, 4) (ppb; range 7 to 4,520 ppb). The highest exposures in this study were found in children and in the elderly. These blood serum levels are substantially higher than the 5 ppb nationwide average identified in other studies (5). The researchers in the University of Pennsylvania study found no evidence of toxicity based upon limited assessment. However, in the human exposure study, the investigators did not examine the toxic endpoints that were of concern in animal studies including increased liver weights, cytological changes in the liver, alterations in gene expression, or developmental effects. The available data do not provide a definitive picture of the presence or absence of C-8 effects on human health.

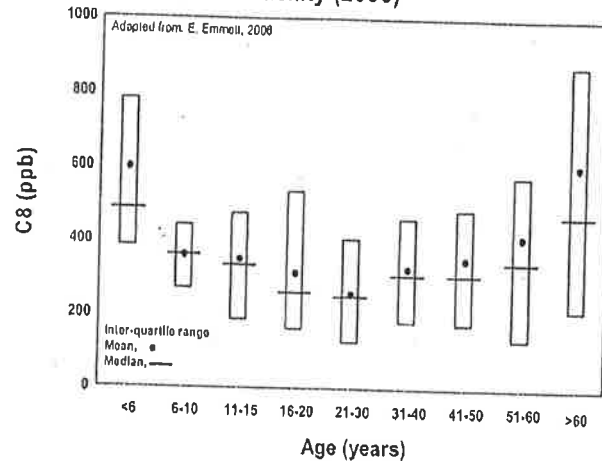
C8 can be absorbed through the ingestion, inhalation, and dermal routes of exposure. Possible exposure pathways for C8 near the Washington Works facility include drinking water in affected areas and water used for cooking, washing, laundry, and showering. Limited data from the Ohio study suggest that drinking water is the primary exposure route, and that eating home-grown vegetables and fruits from this vicinity may increase exposures to C8. However, thorough exposure pathway analyses for residents have not yet been completed and additional pathways may be present. Ambient air emissions from the Washington Works facility may contribute to human exposure in the vicinity of the plant through direct or indirect contamination of groundwater and contributions to household dust. Workers at the facility may accidentally carry dust home on clothing and indirectly expose household members.

Studies in rodents have shown that C8 toxicity is similar through both ingestion and inhalation pathways (6). Since C8 is expected to cross the skin, similar toxic responses are expected from dermal exposure.

C8 is carcinogenic in rodents by multiple mechanisms (7, 8) and in multiple organ systems (9-11). Some tumors caused by C8 are associated with a biochemical process known as peroxisome proliferation. There is an ongoing scientific debate regarding the relevance of these tumors for adult humans. Nonetheless, C8 may cause tumors and non-cancerous toxicity by mechanisms independent of peroxisome proliferation and these may be of concern to humans.

C8 displays moderate to severe non-cancer toxicity in short term dosing studies conducted in primates. Exposure of *Cynomolgus* monkeys to C8 for six months demonstrated liver toxicity in all dose groups tested. This toxicity was not related to peroxisome proliferation (12) though the exact mechanism is unclear. One high dose animal in this study suffered severe treatment-related effects and had to be euthanized. A second animal, in the low dose group (3 mg/kg-d), was euthanized on day 127 of the study and, although the cause of morbidity was unclear, treatment-related effects could not be ruled out. Rhesus monkeys (13) were exposed to C8 for 13 weeks at doses ranging from 3 to 30 mg/kg-day and displayed clinical signs of toxicity that included gastrointestinal distress, reductions in body weight in all groups tested, and mortality in the high dose group (30 mg/kg-day).

Figure 1: Age and C8 Levels in Blood Measured in the Residential Population near the Washington Works Facility (2006)



A variety of scientific information has emerged since development of the 2002 drinking water action level was developed for the vicinity of the Washington Works plant (4, 14). Recent developmental studies (15) in mice suggest toxicity findings for C8 that were not available for consideration in the 2002 risk calculations conducted by the West Virginia Department of Environmental Protection (16). These developmental studies suggest that in utero exposure of mice to C8 during late pregnancy results in a striking dose-related perinatal mortality (similar findings were observed for perfluorooctane sulfonate, PFOS).

A margin of exposure (MOE) approach can be used to describe the potential for human health effects associated with exposure to a chemical. The MOE is usually based on external exposure levels, and is calculated as the ratio of the No Observable Adverse Effect Level (NOAEL) or Lowest Observable Adverse Effect Level (LOAEL) for a specific toxicological endpoint in an animal or human study to the estimated human exposure level at the site of concern. The MOE does not provide an estimate of population risk, but simply describes the relative "distance" between the site-specific exposure level and the NOAEL or LOAEL. In general, a smaller MOE means greater potential risk that humans may experience toxicity. As noted above, there are substantial species differences in the elimination of C8 from the body (17, 18). This means that two different species could have vastly different blood levels resulting from the same exposure level. Thus, for C8 it is necessary to use an actual measure of C8 in the body (known as internal dose) when estimating a margin of exposure between humans and animal test species. This approach was used in the draft OPPT risk assessment and was supported by the SAB (19).

The studies conducted in Cynomolgus monkeys (12) and Rhesus monkeys (13) showed toxicity in the low dose group (3 mg/kg-day) with steady-state serum C8 concentrations of 77,000 ppb. Recent human exposure studies conducted in 326 individuals near the Washington Works facility (Figure 1) measured mean blood concentrations of C8 of 369 ppb (3, 4) the range of blood concentrations was 7 to 4520 ppb. The average MOE for C8 in this population is therefore, approximately 209 with a range of 17 to 11,000. This represents an extremely narrow MOE. Given uncertainties in the toxicology of C8 and the severity of the effects (mortality) observed in the monkey studies, this MOE may represent significant average risk to the exposed human population and high risk to highly exposed individuals within the population.

As a result of the weight of scientific evidence regarding the toxicity and toxicokinetics of C8, including emergent data such as: 1) evidence of high blood serum levels in human populations adjacent to the Washington Works facility and the resultant narrowing MOE, 2) animal studies demonstrate potential for developmental toxicity including mortality, 3) steep and unstable dose-response relationships in non-human primates that often culminate in mortality and, 4) evidence of carcinogenicity in laboratory animals in multiple organ systems, NEIC recommends that steps be taken to eliminate or reduce human exposure to C8 in the vicinity of the Washington Works facility. This includes a site-specific drinking water action level of 0.5 ug/L for the communities surrounding the Washington Works facility (see Appendix 1). We feel that it is particularly important to address ongoing exposure to the residential population, especially pregnant women, neonates, and the elderly by identification and elimination of multiple exposure pathways associated with C8 in water distribution systems. This is a precautionary recommendation to reduce exposure to the population living in the vicinity of the Washington Works facility.

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Appendix 1:

Generation of a recommended site-specific drinking water (DW) Action Level for protection of infants and children exposed to C8 associated with the Washington Works facility, Washington, WV.

$$\text{Recommended Site-Specific Action Level for DW (SAL)} = \frac{\text{LOAEL} \times \text{BW} \times \text{RSC}}{\text{UF} \times \text{IR}}$$

Chemical	Toxicity endpoint/ Critical Study ⁽¹²⁾	LOAEL	UF	RSC	SAL for DW
C8 CAS #335-67-1	Liver Disease and Clinical toxicity	3 mg/kg-d	1.35E4	0.2	0.5 µg/L*

LOAEL = Lowest Observable Adverse Effect Level (12)

BW = Body Weight (10 kilograms)

RSC = Relative Source Contribution – EPA typically estimates that 20% of exposure is derived from drinking water. Other exposure sources include (but are not limited to) dermal exposure, ingestion of garden vegetables, and inhalation of volatile C8.

(<http://www.epa.gov/waterscience/criteria/humanhealth/method/complete.pdf>)

IR = Ingestion Rate (0.85 liters/day: <http://www.epa.gov/ncea/cfh/pdfs/efh-chapter03.pdf>)

UF = Uncertainty Factor (as indicated below)

10X for extrapolation of a LOAEL to a NOAEL

10X for intraspecies variability

135X for interspecies variability ---- [3 for toxicodynamics · 45mos⁽²⁰⁾/1mos] (clearance in humans)/(clearance in monkeys)

This site-specific drinking water action level is associated with both uncertainty and variability. The estimate, though intended to be protective of the general population (including infants, children, and the elderly) in the vicinity of the Washington Works facility, is dependent upon assumptions regarding both exposure and toxicity of PFOA. Actual risks may vary as a function of individual exposure (such as drinking water intake) and biological susceptibility.





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west virginia department of environmental protection

WATER PROTECTION DIV.
WATERSHEDS OFFICE

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Telephone Number: (304) 926-0495
Fax Number: (304) 926-0496

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

February 13, 2006

Branch Chief (3WP11)
PA/DE/WV Branch
Water Protection Division
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Re: Permit Renewal Application
No. WV0076244
Dry Run Landfill

Dear Sir:

Pursuant to Section 402 of the Clean Water Act, 40 CFR Parts 123.43 and 123.44 and the Memorandum of Agreement (MOA), we herewith submit copies of the public notice, complete permit application, any fact sheet and draft permit for the above referenced facility or activity for your review. If within thirty (30) days after receipt of this submission, you fail to provide a general objection to or request a time extension, the Division of Water and Waste Management shall deem the application complete with respect to EPA review and issue the permit.

Sincerely,

Sudhir Patel
Waste Permitting Manager

Enclosures

PUBLIC NOTICE

Department of Environmental Protection
Division of Water & Waste Management
Office of Waste Management
601 57th Street SE
Charleston, WV 25304
(304) 926-0465

APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) WATER POLLUTION CONTROL PERMIT

Permit notice no.: IW-01-06 **Paper:** The Parkersburg News
Public notice dates: February 15, 2006 519 Juliana Street
Public notice dates: February 22, 2006 Parkersburg, WV
26101

Applicant: E I Dupont De Nemours & Co.
PO Box 1217
Washington, West Virginia 26181

Permit Modification Application no.: WV0076244-A

Location: Lubeck, Wood County

Latitude: 39° 11' 07" **Longitude:** 81° 41' 18"

Activity:

- 1) Construct and operate leachate collection and treatment systems at the Dry Run Landfill for the treatment of metals and ammonium perfluorooctanoate.
- 2) Discharge effluent from the leachate treatment systems to the waters of Dry Run, a tributary of the North Fork of Lee Creek, a tributary of the Ohio River (one outlet).

Dry Run Landfill

IW-01-06/WV0076244

February 15 & February 22, 2006

On the basis of review of the application, the "Water Pollution Control Act (Chapter 22, Article 10-8(a)), " and the "West Virginia Legislative Rules, " the State of West Virginia will act on the above application.

Interested persons may submit written comments during the 30-day public comment period, which begins on ***February 15, 2006 and ends on March 16, 2006 to the following address:***

West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street SE
Charleston, WV 25304
Attention: Dawn Jones

Comments received within this time period will be considered prior to any state action on the subject application. Correspondence should include the name, address, and telephone number of the writer and a concise statement of the nature of the issues addressed. The Director shall hold a public hearing whenever a finding is made, on the basis of requests, that there is a significant degree of public interest on issues relevant to the Draft Permit(s). Interested persons may contact the Dawn Jones to obtain further information.

The draft permit and any required fact sheet will be on file for public review during the comment period at the Division of Water & Waste Management at, 601 57th Street SE, Charleston, WV 25304, (304) 926-0499, ext 1266; between 8 a.m. and 5 p.m., Monday through Friday. To receive a copy of the permit application, draft permit or fact sheet, please contact Dawn Jones at (304) 926-0499, ext 1356.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

FACT SHEET

APPLICATION FOR STATE NPDES WATER POLLUTION CONTROL PERMIT

1. **NAME & ADDRESS OF APPLICANT:**
E.I. DuPont de Nemours & Co.
P.O. Box 1217
Washington, WV 26181
2. **NAME & ADDRESS OF FACILITY:**
E.I. DuPont de Nemours & Co.
State Route 892, South
Washington, WV 26181
3. **STATE SW/NPDES APPLICATION NO.** WV0076244-A
4. **COUNTY:** Wood **RECEIVING STREAMS:** Dry Run, a tributary of the North Fork of Lee Creek, a tributary of the Ohio River.
5. **PUBLIC NOTICE NO.**
COMMENT PERIOD:
6. **SIC CODES:** 4953
7. **DESCRIPTION OF APPLICANT'S FACILITY OR ACTIVITY:**
BUSINESS: Chemical Manufacturing
ACTIVITY: See General section below.

GENERAL

By Permit Modification Application Number WV0076244-A dated January 17, 2006, the permittee requested that Solid Waste/NPDES Water Pollution Control Permit Number WV0076244 dated March 3, 2005 be modified to allow the construction and operation of leachate collection and treatment systems at the Dry Run Landfill, specifically, a metals treatment unit and a granular activated carbon unit for the treatment of metals and ammonium perfluorooctanoate, which will collect and treat effluent currently discharging through Outlet Numbers 001 and 005 to Dry Run. Listed below are permit section/conditions to be modified or added pursuant to this permit modification followed by the permit writer's rationale for each modification/addition. Subsequent to the review of Permit Modification Application Number WV0076244-A, this draft permit and related fact sheet have been prepared in accordance with the public notification requirements referenced in Title 33, Series 1, Solid Waste Management Rule.

SPECIFIC PERMIT CONDITIONS – Rationale

A. - DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

Section A.006 – As the discharge from the leachate collection and treatment systems will be directed to Dry Run, the writer proposes that monitoring and effluent limitations identical to those imposed at existing Outlet Numbers 001 and 005 be required.

Anti-degradation – Quantities of pollutants discharged to Dry Run from Outlet No. 006 are anticipated to be less than historical quantities discharged to Dry Run from Outlet Numbers 001 and 005 as the result of the collection and treatment of leachate.

Sections A.MW6A, A.MW12, A.MW12A, A.MW12B, A.MW13, A.MW13A, and A.MW15 – See Condition C.14 below.

C. OTHER REQUIREMENTS - RATIONALE

Condition C.14 - Chapter 22, Article 12, Section 5(e) of the West Virginia Code requires that existing groundwater quality be maintained and protected when the existing groundwater quality is better than the groundwater Standards of Purity and Quality referenced in Title 46, Series 12 of the West Virginia Code, Requirements Governing Groundwater Standards, effective August 25, 1993. Therefore, Condition C.14 of Permit No. WV0076244 required that the permittee provide by September 30, 2005 proposed existing groundwater standards of purity and quality for Nitrate Nitrogen, Nitrite Nitrogen, Fluoride, Antimony, Beryllium, Cadmium, and Thallium for monitoring wells MW-6A, MW-12, MW-12A, MW-12B, MW-13, MW-13A, and MW-15 utilizing the draft June 1996 West Virginia Department of Environmental Protection document entitled "Guidance for Establishing Groundwater Quality Protection Standards in Solid Waste Permits." Therefore, the permittee submitted the requested information by letter dated September 21, 2005. As Condition C.16 of the permit states that the permittee shall not cause groundwater concentrations to exceed the proposed standards provided by Condition C.14, the permit writer proposes that Sections A.MW6A, A.MW12, A.MW12A, A.MW12B, A.MW13, A.MW13A, and A.MW15 be modified to include the existing groundwater standards of purity and quality provided with the September 21, 2005 letter except as noted below.

- The Standards of Purity and Quality referenced for Cadmium for well MW-15 (.009 mg/l) and for Thallium for well MW-13 (.006 mg/l) exceed the maximum Standards of Purity and Quality for Cadmium and Thallium referenced in Title 46, Series 12, of .005 mg/l and .002 mg/l, respectively. Therefore, the writer proposes that the existing water quality standards be limited to the maximum Standards of Purity and Quality for Cadmium and Thallium referenced in Title 46, Series 12.

Condition C.49 – The existing permit requires that Dry Run be sampled concurrently with the sampling of the discharge from Outlet No. 001. As Outlet No. 001 will be removed from service when the above referenced leachate collection and treatment systems become operational, this condition requires that Sampling Point Numbers 1 and 2 be sampled concurrently with the sampling of the discharge from Outlet No. 006.

Condition C.50 – Existing Outlet No. 005 will be sealed concurrent with the placement into operation of the pond underdrain pump station. Effluent previously directed to Outlet No. 005 will instead be routed to the pond underdrain pump station from where it will be directed to the above referenced leachate treatment systems. Should the underdrain pump station overflow, the writer proposes that it be sampled and analyzed in accordance with Section A.005 of the permit. For this purpose, the writer proposes that the underdrain pump station be fitted with an overflow pipe which shall serve as relocated Outlet No. 005.

Condition C.51 – Permit Application No. WV0076244-A includes a schedule of activities to be undertaken culminating with the operation of the above referenced leachate collection and treatment systems and related telemetry system referenced in Permit Modification Application No. WV0076244-A by December 31, 2006. To assure such, this condition specifies that said systems be constructed and operational by December 31, 2006.

**DRAFT**

west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Telephone Number: (304) 926-0495
Fax Number: (304) 926-0496

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

2006

Mr. Robert Ritchey
E.I. DuPont de Nemours & Co.
P. O. Box 1217
Washington, WV 26181-1217

Re: Modification No. 1 of Solid Waste/NPDES Permit No.
WV0076244, Dry Run Landfill, Wood County

Dear Mr. Ritchey:

This serves as Modification No. 1 of the above referenced permit.

After careful consideration of the information submitted with Permit Modification Application No. WV0076244-A dated the 17th day of January 2006, the above permit is hereby modified to:

1. Allow the construction and operation of a leachate collection system and a leachate treatment system at the Dry Run Landfill, specifically, a metals treatment unit and a granular activated carbon unit for the treatment of metals and ammonium perfluorooctanoate, and
2. Discharge effluent from the above referenced treatment system to Dry Run Creek.

As a result of this modification, the following changes to Permit No. WV0076244 are referenced below:

Revise the paragraph following the sentence "This permit is subject to the following terms and conditions" as follows: The information submitted on and with Permit Modification Application No. WV0076244-A dated the 17th day of January 2006, Permit Application No. WV0076244 dated the 1st day of July 2003, and the additional information submitted on and with letters dated the 1st day of May 1996, the 18th day of June 1996, the 23rd day of December 1996, the 21st day of February 1997, the 7th day of March 1997, the 6th day of June 1997, the 21st day of October 2002, the 9th day of December 2002, the 6th day of February 2003, the 14th day of July 2003, the 8th day of September 2003, and the 21st day of September 2005 are all hereby made terms and conditions of this Permit with like effect as if all such permit application information were set forth herein, and other conditions set forth in Sections A, B, and C, and Appendix A;

Add Section A.006;

Revise Sections A.MW6A, A.MW12, A.MW12A, A.MW12B, A.MW13, A.MW13A, and A.MW15 by incorporating the following standards of purity and quality:

	Antimony	Beryllium	Cadmium	Fluoride	Nitrate Nitrogen	Nitrite Nitrogen	Thallium
Monitoring Well	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
MW-6A	.0025	.00025	.0025	.24	.29	.011	.0015
MW-12	.0025	.00025	.0025	.77	.26	.005	.0015
MW-12A	.0025	.00025	.0025	.25	.07	.02	.0015
MW-12B	.0025	.00025	.0025	.21	.025	.005	.0015
MW-13	.0025	.00025	.0025	.99	1.62	.014	.002
MW-13A	.0025	.00025	.0025	.22	4.5	.005	.0015
MW-15	.0025	.00025	.005	3.09	4.5	.03	.0015

Promoting a healthy environment.

EPA 00520

DRAFT

Modification No. 1
Permit No. WV0076244
Page Two

Add Condition C.49 as follows: "The permittee shall sample Stream Sampling Point Numbers 1 and 2 concurrently with the sampling of the discharge from Outlet No. 001 until such time that Outlet No. 001 is removed from service. After that time, Stream Sampling Point Numbers 1 and 2 shall be sampled concurrently with the sampling of the discharge from Outlet No. 006."

Add Condition C.50 as follows: "Prior to the plugging with concrete of the 4" solid wall HDPE pipe currently designated Outlet No. 005, the pond underdrain pump station depicted on Figure 6 of Permit Modification Application No. WV0076244-A shall be fitted with an overflow pipe which shall serve as relocated Outlet No. 005."

Add Condition C.51 as follows: "The permittee shall by December 31, 2006, construct and place into operation the leachate collection and treatment systems and related telemetry system referenced in Permit Modification Application No. WV0076244-A dated January 17, 2006."

Attached please find Pages 19A, 19B, 19C, 19D, 19E, 19F, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 43, 44, 45, 64, 65, and 66 which have been modified to reflect the above referenced revisions. Likewise, also please find attached new page 78A.

This modification shall become effective immediately.

Sincerely,

Lisa A. McClung
Director

LAM/jb

Enclosures

cc: Insp, SW Dist.
Supv., SW Dist.

Section C - Other Requirements

49. The permittee shall sample Stream Sampling Point Numbers 1 and 2 concurrently with the sampling of the discharge from Outlet No. 001 until such time that Outlet No. 001 is removed from service. After that time, Stream Sampling Point Numbers 1 and 2 shall be sampled concurrently with the sampling of the discharge from Outlet No. 006.
50. Prior to the plugging with concrete of the 4" solid wall HDPE pipe currently designated Outlet No. 005, the pond underdrain pump station depicted on Figure 6 of Permit Modification Application No. WV0076244-A shall be fitted with an overflow pipe which shall serve as relocated Outlet No. 005.
51. The permittee shall by December 31, 2006, construct and place into operation the leachate collection and treatment systems and related telemetry system referenced in Permit Modification Application No. WV0076244-A dated January 17, 2006.

DRAFT

A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:
Interim Limitations

Year Round

During the period beginning (placement into service) and lasting through midnight March 1, 2008 the permittee is authorized to discharge from Outlet Number(s) 006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>		<u>Other Units</u>	<u>Units</u>	<u>Monitoring Requirements</u>	
							<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow, in Conduit or thru plant (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Estimated
BOD, 5-Day 20 Deg.C (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	10 Max. Daily	1/month	Grab
Total Suspended Solids (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	60 Max. Daily	1/month	Grab
Coliform, Fecal (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	400 Max. Daily	1/month	Grab
pH (Year Round) (ML-1)	N/A	N/A	N/A	6 Daily Min.	N/A	9 Max. Daily	1/month	Grab
Ammonia Nitrogen (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab
Nitrogen, Kjeldahl Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrite (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
 Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:
Interim Limitations

DRAFT

Year Round
During the period beginning (placement into service) and lasting through midnight March 1, 2008 the permittee is authorized to discharge from Outlet Number(s)
006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Quantity	Units	Discharge Limitations		Other Units	Units	Monitoring Requirements		
							Measurement Frequency	Sample Type	
Phosphorus, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Aluminum, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/month	Grab
Iron Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	0.93 Avg. Monthly	2.73 Max. Daily	mg/l	1/month	Grab
Fluoride, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	mg/l	1/month	Grab
Toxicity, Chronic Daphnia (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	TUc	1/6 months	24 hr Composite
Toxicity, Chronic Pimephales (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	TUc	1/6 months	24 hr Composite
Benzene (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	ug/l	1/month	Grab
Solids, Total Dissolved (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	mg/l	1/month	Grab
Boron, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	mg/l	1/month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

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A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:
Interim Limitations

Year Round

During the period beginning (placement into service) and lasting through midnight March 1, 2008 the permittee is authorized to discharge from Outlet Number(s) 006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

Such discharges shall be limited and monitored by the permittee as specified below:							Monitoring Requirements		
Effluent Characteristic	Quantity	Units	Discharge Limitations		Other Units	Units	Measurement Frequency	Sample Type	
Total Recov. Manganese (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab	
Sulfate (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab	
Thallium, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	0.0017 Avg. Monthly	0.0025 Max. Daily	1/month	Grab	
Beryllium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	0.0077 Avg. Monthly	0.0112 Max. Daily	1/month	Grab	
Ammonium Perfluorooctanoate (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab	
Octylphenoxypolyethoxyethanol (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab	

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
 Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

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A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations
Year Round

During the period beginning March 2, 2008 and lasting through midnight March 2, 2010 the permittee is authorized to discharge from Outlet Number(s) 006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>		<u>Other Units</u>	<u>Units</u>	<u>Monitoring Requirements</u>	
							<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow, in Conduit or thru plant (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Estimated
BOD, 5-Day 20 Deg. C (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	10 Max. Daily	1/month	Grab
Total Suspended Solids (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	60 Max. Daily	1/month	Grab
Coliform, Fecal (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	400 Max. Daily	1/month	Grab
pH (Year Round) (ML-1)	N/A	N/A	N/A	6 Daily Min.	N/A	9 Max. Daily	1/month	Grab
Ammonia Nitrogen (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab
Nitrogen, Kjeldahl Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrite (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning March 2, 2008 and lasting through midnight March 2, 2010 the permittee is authorized to discharge from Outlet Number(s) 006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Quantity	Units	Discharge Limitations		Other Units	Units	Monitoring Requirements	
							Measurement Frequency	Sample Type
Nitrogen, Total (AS N) (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab
Nitrogen, Total (AS N) (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Phosphorus, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	0.055 Avg. Monthly	0.159 Max. Daily	1/month	Grab
Iron Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	0.93 Avg. Monthly	2.73 Max. Daily	1/month	Grab
Fluoride, Total (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab
Toxicity, Chronic Daphnia (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	1 Max. Daily	1/6 months	24 hr Composite
Toxicity, Chronic Pimephales (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	1 Max. Daily	1/6 months	24 hr Composite
Benzene (Year Round) (ML-1)	N/A	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

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Permit No.: WV0076244

Incorporated Date : ~~January 24, 2008~~

A.006 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:
Final Limitations
Year Round

During the period beginning March 2, 2008 and lasting through midnight March 2, 2010 the permittee is authorized to discharge from Outlet Number(s) 006 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>		
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>	
Solids, Total Dissolved (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Boron, Total (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Total Recov. Manganese (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Sulfate (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Thallium, Total (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Beryllium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Ammonium Perfluorooctanoate (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	
Octylphenoxypolyethoxyethanol (Year Round) (ML-1)	N/A	N/A	N/A	1/month	Grab	

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
 Outlet No. 006, an 8" SDR 35 PVC pipe

This discharge shall not cause violation of Title 46, Series 1, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

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Permit No.: WV0076244

Incorporated Date : ~~January 24, 2009~~

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A.MW-12 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

<u>Monitoring Well Characteristic</u>	<u>Monitoring Requirements</u>			<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	0.26 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	0.005 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	0.77 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Monitoring Well MW-12

A.MW-12 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12

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A.MW-12 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	mg/l	1/quarter	Grab
See Condition C.2.a.						
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	mg/l	1/quarter	Grab
See Condition C.2.a.						
Antimony, Dissolved(As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	mg/l	1/quarter	Grab
See Condition C.2.a.						
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	mg/l	1/quarter	Grab
See Condition C.33.						
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	ug/l	1/quarter	Grab
See Condition C.33.						
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	mg/l	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12

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Revised Date : ~~January 24, 2006~~

A.MW-12A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	0.07 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	0.02 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	0.25 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12A

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A.MW-12A MONITORING WELL REQUIREMENTS:**Final Limitations****Year Round**

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

<u>Monitoring Well Characteristic</u>	<u>Monitoring Requirements</u>				<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>	<u>Units</u>			
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a. Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Monitoring Well MW-12A

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Revised Date: ~~January 24, 2000~~

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A.MW-12A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

<u>Monitoring Well Characteristic</u>	<u>Monitoring Requirements</u>				<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>				
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0015 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Antimony, Dissolved(As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.33.							

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12A

A.MW-12B MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12B (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12B

A.MW-12B MONITORING WELL REQUIREMENTS:
Final Limitations
Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12B (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

<u>Monitoring Well Characteristic</u>	<u>Monitoring Requirements</u>			<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>			
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12B

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A.MW-12B MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-12B (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0015 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Antimony, Dissolved (As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.33.							

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-12B

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Permit No.: WV0076244

Revised Date : ~~January 24, 2006~~

DRAFT

A.MW-13 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements					Measurement Frequency	Sample Type
	Quantity	Units	Other Units	Units			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	N/A	1.62 Max. Daily	1/quarter	Grab
Nitrogen Nitrite (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	N/A	0.014 Max. Daily	1/quarter	Grab
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	N/A	0.99 Max. Daily	1/quarter	Grab
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-13

A.MW-13 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units	Units			
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

See Condition C.2.a.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-13

DRAFT

A.MW-13 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.002 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Antimony, Dissolved (As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.33.							

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-13

DRAFT

A.MW-13A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	4.5 Max. Daily	1/quarter	Grab
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	0.005 Max. Daily	1/quarter	Grab
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	0.22 Max. Daily	1/quarter	Grab
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Monitoring Well MW-13A

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Permit No.: WV0076244

Revised Date: ~~January 24, 2006~~

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A.MW-13A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-13A

DRAFT

A.MW-13A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-13A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.015 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Antimony, Dissolved(As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
See Condition C.2.a.							
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
See Condition C.33.							

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Monitoring Well MW-13A

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Permit No.: WV0076244

Revised Date : ~~January 24, 2009~~

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A.MW-15 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-15 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	4.5 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	0.03 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	3.09 Max. Daily	1/quarter	Grab
See Condition C.2.a.						
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-15

DRAFT

A.MW-15 MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-15 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C. (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.005 Max. Daily	1/quarter	Grab
See Condition C.2.a. Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-15

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Permit No.: WV0076244

Revised Date : ~~January 24, 2000~~

A.MW-15 MONITORING WELL REQUIREMENTS:
Final Limitations
Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-15 (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

<u>Monitoring Well Characteristic</u>	<u>Monitoring Requirements</u>			<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>			
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	0.0015 Max. Daily	1/quarter	Grab
Dissolved Beryllium (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
Antimony, Dissolved(As Sb) (Year Round) (ML-O) See Condition C.2.a.	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O) See Condition C.33.	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-15

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A.MW-6A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-6A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Total Suspended Solids (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
pH (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonia Nitrogen (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Nitrogen Nitrate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.29 Max. Daily	1/quarter	Grab
Nitrogen Nitrite (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.011 Max. Daily	1/quarter	Grab
Chloride (as Cl) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Fluoride, Total (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.24 Max. Daily	1/quarter	Grab
Solids, Total Dissolved (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Aluminum, Dissolved (As AL) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Monitoring Well MW-6A

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Permit No.: WV0076244

Revised Date : ~~January 21, 2009~~

A.MW-6A MONITORING WELL REQUIREMENTS:
Final Limitations
Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-6A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements			Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units			
Specific Conductance (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Temperature, C (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Copper, Dissolved (As CU) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Iron, Dissolved (As FE) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Manganese, Dissolved (As MN) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Total Organic Carbon (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Sulfate (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Cadmium, Dissolved (As CD) (Year Round) (ML-O)	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
Boron, Dissolved (As B) (Year Round) (ML-O)	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-6A

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A.MW-6A MONITORING WELL REQUIREMENTS:

Final Limitations

Year Round

During the period beginning (effective date of modification) and lasting through midnight March 2, 2010 the permittee will monitor Well Number(s) MW-6A (Monitoring Well)

Such well shall be monitored by the permittee as specified below:

Monitoring Well Characteristic	Monitoring Requirements				Units	Measurement Frequency	Sample Type
	Quantity	Units	Other Units				
Chem. Oxygen Demand (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Dissolved Thallium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0015 Max. Daily	1/quarter	Grab
Dissolved Beryllium (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.00025 Max. Daily	1/quarter	Grab
Antimony, Dissolved(As Sb) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	0.0025 Max. Daily	1/quarter	Grab
Silver, Dissolved (As AG) (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Ammonium Perfluorooctanoate (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab
Octylphenoxypolyethoxyethanol (Year Round) (ML-O)	N/A	N/A	N/A	N/A	Rpt Only Max. Daily	1/quarter	Grab

See Condition C.33.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Monitoring Well MW-6A

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Permit No.: WV0076244

Revised Date : ~~January 24, 2008~~

State of West Virginia

OFFICE OF ENVIRONMENTAL HEALTH SERVICES
WASHINGTON STREETS | DAVIS SQUARE

CAPITOL and WASHINGTON STREETS

1 DAVIS SQUARE, SUITE 200
TELEPHONE 304-558-2981

CHARLESTON, WEST VIRGINIA 25301

PERMIT

PROJECT: (Water)
GAC Filters at Water Treatment Plant

PERMIT NO.: 17,098

LOCATION: Washington

COUNTY: Wood

DATE: 6-14-2006

THIS IS TO CERTIFY that after reviewing plans, specifications, application forms, and other essential information that

Lubeck Public Service District
P. O. Box 700

Washington, West Virginia 26181-0700

is hereby granted approval to: install two (2) Calgon Model 10 Granular Activated Carbon (GAC) Absorption Systems (with each model consisting of 2 freestanding vertical pressure vessels containing 20,000 pounds of GAC); three (3) 850 GPM pumps with variable frequency drives to pump through the GAC filters; a new 40 feet X 40 feet filter backwash sand drying bed; a new permanent generator; and all necessary piping, valves, controls, electrical equipment, meters and appurtenances at the Lubeck Public Service District Water Treatment Plant. The GAC filters and GAC filter pumps will be located in a new building.

Facilities are being installed to reduce and/or remove PFOA, a disassociated form of ammonium perfluorooctanoate (APFO; commonly known as C-8 and historically known as FC-143) and other salts.

Validity of this permit is contingent upon conformity with plans, specifications, application forms, and other information submitted to the West Virginia Bureau for Public Health.

FOR THE DIRECTOR

William S. Herold, Jr.
William S. Herold, Jr., P.E., Assistant Manager
Infrastructure and Capacity Development
Environmental Engineering Division



WSH:cmt

pc: URS Corporation
Corporate Remediation Group
James W. Ellars, P.E., Engineering Division, PSC
Amy Swann, PSC
Wood County Health Department
OBHS-EED Wheeling District Office
William Toomey

STEPTOE & JOHNSON LLP

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Tel 202.429.3000
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May 5, 2005

Via U.S. MAIL

Richard A. Hayhurst, Esq.
414 Market Street
P.O. Box 86
Parkersburg, WV 26102

Re: Water Treatment Project for Lubeck Public Service District

Dear Richard:

On November 17, 2004, E. I. du Pont de Nemours and Company ("DuPont") entered into a Settlement Agreement resolving a class action lawsuit in the Circuit Court of Wood County, West Virginia, captioned *Jack W. Leach, et al. v. E. I. du Pont de Nemours and Company and Lubeck Public Service District*, Case No. 01-C-608. On February 28, 2005, The Circuit Court of Wood County, West Virginia, approved this Settlement Agreement, relevant portions of which are enclosed with this letter.

The Lubeck Public Service District ("Lubeck") is not a party to the Settlement Agreement. However, the Settlement Agreement requires DuPont "to offer to design or procure and install state-of-the-art water treatment technology or its functional equivalent at [DuPont's] sole cost and expense for each of the [named] Public Water Districts to reduce the levels of C-8 in the affected water supply to the lowest practicable levels as specified by the individual Public Water Districts (the 'Water Treatment Project' [or 'Project'])." Settlement Agreement § 11.1. Lubeck is one of the public water districts to which DuPont is obligated to make an offer under the Settlement Agreement. Accordingly, I write to confirm formally DuPont's offer.

As you know, to help formulate its offer, DuPont has discussed technical aspects of water treatment with Lubeck on multiple occasions. By way of background, I will review the treatment technology proposed by DuPont.

DuPont engineers have determined that the state-of-the-art water treatment technology for this purpose is Granular Activated Carbon filtration. This technology involves large diameter Granular

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Richard A. Hayhurst, Esq.
May 5, 2005
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Activated Carbon beds, which for Lubeck would likely be 5,000- to 20,000-pound units. The beds will be housed in a building with a concrete slab. The building and connecting pipes will be insulated to maintain a temperature range to protect the Water Treatment Project and Lubeck's existing treatment system. Pumps or other pressure maintenance features will be installed to maintain appropriate water pressure for the Project, and the treatment unit will be positioned at a location near an access road. More specific design plans will be prepared by DuPont, in consultation with Lubeck, as more specific technical information is gathered. DuPont shall bear all costs of purchase and installation of the necessary equipment for water treatment. Also, DuPont shall design the specific water treatment system at its expense and shall be responsible for any and all necessary regulatory approval.

DuPont will also pay for operation and maintenance of the water treatment system for a period of time determined by the pertinent science, as defined by the Settlement Agreement.¹ Under the Settlement Agreement, an independent Science Panel has been charged with determining whether there is a Probable Link between C-8 exposure and any Human Disease, as those terms are defined in the Settlement Agreement. DuPont will provide for the Water Treatment Project installed at Lubeck during the period necessary for the Science Panel to reach its determination. DuPont intends to bear direct responsibility for the necessary maintenance costs, such as changing the carbon filters. However, to the extent that Lubeck incurs operation or maintenance costs directly and exclusively attributable to the Project, DuPont will reimburse Lubeck on a quarterly basis. If the Science Panel finds a Probable Link between C-8 and Human Disease, DuPont will continue to provide for the Water Treatment Project. Even if no such Probable Link is found, DuPont will continue to provide for the Project to the extent necessary to meet applicable state or federal regulations governing C-8 concentrations in Lubeck's public drinking water supply. In the absence of such a regulation compelling continued water treatment, if the Science Panel finds no Probable Link between C-8 and Human Disease, DuPont will implement one of two options, as directed by Lubeck. DuPont will either (1) convey the equipment relating to the Project to Lubeck at no cost to Lubeck, or (2) pay all expenses to remove the equipment entirely and return the Lubeck property to its condition before the equipment's installation.

The Settlement Agreement also requires DuPont to create a development plan for the Water Treatment Project in consultation with Lubeck. This development plan will detail the overall plan for the design, development, construction and operation of the Project, including, but not limited to:

- (a) preliminary site plans for the Project to be designed to comply with applicable regulatory requirements;

¹ DuPont will also pay reasonable costs for operation and maintenance of the Project, including expenses arising from electricity, repairs of equipment, and replacement of carbon filters necessary to run the Project effectively. In addition, DuPont will pay up to \$10,000 to reimburse Lubeck for costs incurred by the water district for necessary work conducted by Lubeck engineers employed by Lubeck arising from installation or operation of this system.

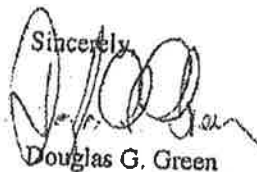
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- (b) a description of the type of improvements to be constructed and/or equipment to be installed as part of the Project;
- (c) a projected schedule for construction and installation of any required improvements;
- (d) a list of permits, if any, required from regulatory authorities; and
- (e) a proposed budget for the construction and development of the Project and a proposed annual operating budget for the Project.

In addition to what is called for in the Settlement Agreement, DuPont will provide a monitoring plan that provides a schedule for sampling and analysis to determine the carbon change-out schedule.

As I am sure you will recognize, Dupont will need additional information from Lubeck and from the State of West Virginia to complete this development plan.

Please contact me with any questions that you have about DuPont's offer. As you know, DuPont has been proceeding with design of a treatment system for Lubeck and conducting a dialogue with regulatory agencies. We are nearing the point at which Lubeck must determine whether it elects to proceed with the Water Treatment Project proposed by DuPont pursuant to the terms set forth herein. Thank you very much for your assistance in this matter.

Sincerely,

Douglas G. Green

Enclosures

cc: Mr. James M. Cox

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bcc: Dr. George H. Senkler, Jr.
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